

What if your smartphone could predict relapse?

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PREDICTING RELAPSE IN SUBSTANCE USE DISORDERS – TOWARDS A REAL-TIME, MACHINE LEARNING APPROACH USING MOBILE SENSING OF NEUROCOGNITIVE FUNCTIONING



Background

30- 60% of patients that are discharged from inpatient addiction treatment, experience relapse to substance use of varying severity during the first year after discharge

Relapse often appear suddenly and may be suprising both to patients, health care professionals and next- of- kin. The main goal of this project is to enable predictions of imminent relapse.

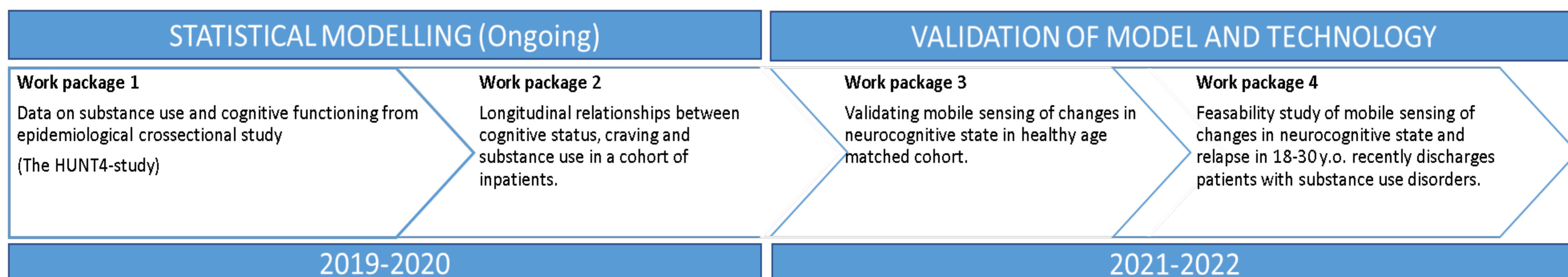
Changes in the neurocognitive state is frequent in the timeframe immediately before relapse. This may be due to stress, mental health changes or neurobiological conditions related to the addiction itself.

The statistical model being developed as part of this project will use mobile sensor data that is related to neurocognitive state.

Knowing how this relates to craving and substance use, we will hopefully be able to predict imminent relapse in real time using data collected from the patients' smart phones.

The statistical model and algorithm may become a 'digital twin' that may help health care professionals, patients and families predict and intervene in the case of imminent relapse.

Methodology



Supervisors and partners

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